



Australian Government

ICTSAS307 Install, configure and secure a small office or home office network

Release: 1

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Modification History

Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.
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Application

This unit describes the skills and knowledge required to identify available network components relevant to client requirements and to install, configure and secure those components as part of a small office or home office (SOHO) network.

It applies to individuals who work under a level of supervision and have experience with analysis and problem solving when working with technologies.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Systems administration and support

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Confirm client requirements and identify relevant network equipment	1.1 Identify and clarify client requirements for the small office home office network 1.2 Identify most suitable network design to meet client requirements 1.3 Develop and document network design 1.4 Identify most suitable network technologies, devices and protocols and network cables and connectors to meet network design 1.5 Review available network technologies, devices and protocols and determine the most appropriate to meet client requirements 1.6 Source vendors and service suppliers to obtain specifications,

ELEMENT	PERFORMANCE CRITERIA
	availability and cost of identified components 1.7 Ensure client sign-off for proposed network design and associated components
2. Install and configure hardware and software	2.1 Develop installation plans with prioritised tasks and contingency arrangements for installation of components with minimum disruption to client 2.2 Liaise with appropriate person to obtain approval for plans, including security clearance and timing 2.3 Confirm and review supplier documentation that network cables and connectors have been installed according to industry standards, client requirements and building requirements 2.4 Install and configure computer and other hardware according to network design and industry standards, using knowledge of relevant installation and configuration tools 2.5 Install and configure network software according to network design and industry standards 2.6 Install and configure other software according to network design and industry standards
3. Configure and test network	3.1 Troubleshoot client-side connectivity using appropriate networking settings to review relevant network tools 3.2 Test installed software and hardware, using available networking tools to ensure components function as expected 3.3 Test network settings to ensure network is functioning according to specification 3.4 Resolve problems identified in testing process
4. Secure network	4.1 Identify possible security concepts and technologies relevant to securing the network 4.2 Apply specific protection using identified security features to protect against possible network attacks 4.3 Troubleshoot different types of security intrusion symptoms and issues
5. Document completed work, hand over to client and obtain client approval	5.1 Document final network design and associated hardware, software and security features 5.2 Document installation, boot up and configuration procedures as per client requirements 5.3 Complete handover and secure sign-off from client

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.2, 1.4-1.6, 2.3-2.6, 3.2, 3.3, 4.1, 4.3	Interprets a range of texts to critically evaluate and design the appropriate network, comparing technical specifications and associated costs to install and maintain the network while adhering to requirements and standards
Writing	1.3, 1.7, 2.1, 2.3, 5.1, 5.2, 5.3	Records specific information using clear and precise language and appropriate format to develop network plans, instructions, installation and technical specifications while adhering to requirements and standards
Oral Communication	1.1, 2.2, 2.3	Participates in a verbal exchange of factual information using listening and questioning techniques to clarify appropriate network installation processes have been maintained and adhere to associated requirements and standards
Numeracy	1.2, 1.4, 1.6, 2.2-2.4	Uses a range of mathematical calculations to evaluate and compare numerical information and forecast costs, and applies familiar measurements concerning available or consumed data, time durations and appropriate cable length
Navigate the world of work	1.7, 2.2, 5.3	Recognises and follows explicit and implicit protocols and meets expectations associated with own role when obtaining approval and sign-off at relevant stages of job
Get the work done	All	- Plans a range of routine and some non-routine tasks, accepting stated goals and aiming to achieve them efficiently, confirming client requirements and identifying relevant equipment - Implements actions as per plan, making slight adjustments if necessary, and addressing some unexpected issues - Makes decisions quickly and intuitively in familiar situations requiring immediate attention, drawing on past experience to identify key variables, consider possible implications of different courses of action and determine the best course of action

		• Uses systematic, analytical processes in configuration and testing of network, setting goals, gathering relevant information, and identifying and evaluating options against agreed criteria • Applies formal problem solving processes when resolving network problems and troubleshooting symptoms and issues, breaking complex issues into manageable parts and identifying and evaluating several options for action • Understands key principles and concepts that underpin the design and operation of digital systems and tools
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTSAS307 Install, configure and secure a small office home office network	ICASAS307A Install, configure and secure a small office home office network	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTSAS307 Install, configure and secure a small office or home office network

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Performance Evidence

Evidence of the ability to:

- identify the most suitable network hardware and software equipment to meet client requirements
- install, configure and test the network according to client requirements, and produce appropriate documentation
- identify possible security threats and secure the network.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify current industry accepted hardware and software products, including those used for networks
- identify data and voice transmission technologies and protocols
- identify hardware and software installation procedures
- describe local area network (LAN) capabilities and characteristics, including:
 - network types
 - internet protocol addressing
 - switch and hub operation
- describe network connections, both wired and wireless
- describe networking technologies, including network operating systems and cabling standards
- describe network operating systems and their basic installation procedures for small office applications
- summarise set-up and configuration procedures
- summarise security implications for a home office network

- describe the methods to secure a home network
- identify small business and home office networking requirements
- identify software packages supported by the organisation
- identify and describe the industry standards applicable to small networks.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the systems administration and support field of work and include access to:

- current industry standard software, hardware, and networking technologies
- server and workstation hardware and software
- internet connection
- live network
- network components, hardware and software
- networked computers
- vendor hardware and software components
- technical documentation and installation manuals.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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